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EXAMINER	
ARCOS, CAROLINE H	

ART UNIT	PAPER NUMBER
2195	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/783,448	CZAJKOWSKI ET AL.	
	Examiner	Art Unit	
	CAROLINE ARCOS	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Amendment filed 03/22/2010.

Claims 1-45 are pending in this application. Claims 1, 18, 29, 36 and 41 are independent claims.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/22/2010 has been entered.

Double Patenting

3. Due to claims amendment, double patenting rejection with Application No. 10783738 has been removed.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 16-17, 28, and 29-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6. As per claims 17, 28, 29 and 36 are not limited to statutory embodiments. In view of applicant's disclosure (specification page 40, par. [1140], lines 7-13), the media is not limited to statutory embodiments, instead being defined as including both statutory embodiments (e.g. Floppy diskette; CD-ROM; magneto- optical storage medium; ROM; RAM; EPROM and EEPROM; flash memory) and non-statutory embodiments (e.g. electrical, optical, acoustical, carrier waves, infrared signals, digital signals, etc.) As such, the claim is not limited to statutory subject matter and therefore non-statutory.

7. Claims 16, 30-35 and 37-40 are rejected for similar reasons as discussed for their respective parent claims, as they fail to present any limitations that resolve the deficiencies of the claims from which they depend.

8. To overcome this type of 101 rejections, the claims need to be amended to recite a non- transitory machine-readable storage media/medium.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-7, 9, 11-12, 14-15, 17-21, 23-34, 36- 38, and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suri et al. ("Strong mobility and fine-grained resource control in NOMADS", ACM, 2000, pages 1-12), in view of Dan et al.

(US 5,825,877).

As per claim 1, Suri teaches the invention substantially as claimed including a method comprising:

if the threshold rate would be exceeded , then delaying servicing of the request for at least a period of time sufficient to avoid exceeding the threshold and that an isolate is a set of one or more computations that do not share computational state with other computations (page 7, lines 30-31; page 10, lines 10-11; Fig. 1; wherein each agent is an isolate that is a set of one or more computations of transactions that does not share computational state with other agents).

Suri doesn't explicitly teach that determining if servicing a consume request for a resource would cause a threshold rate that corresponds to the requested resource to be exceeded, wherein the consume request is received from one of a plurality of resource consuming isolates that are bound to one of a plurality of resource domains in which one or more respective resource policies for the requested resource are installed, and wherein the consume request specifies a measurable, consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates; and Wherein the threshold rate is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the one of the plurality of resource consuming isolates; wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the requested resource with the plurality of resource consuming isolates that are bound to the one of the plurality of resource

domains; and wherein an isolate is a set of one or more computations that do not share computational state with other computations.

However, Dan teaches determining if servicing a consume request for a resource would cause a threshold rate that corresponds to the requested resource to be exceeded (col. 5, lines 32-40), wherein the consume request is received from one of a plurality of resource consuming isolates that are bound to one of a plurality of resource domains (col.1, lines col. 3, lines 38-63; wherein multi-user profiles are bound to the client side using access control, it is implicit in Dan teaching that user is actually a user profile that is bound to the resources in the client side. For example Ramamurthy et al. (Us 7,080,077) cited in previous actions teaches that users bound to resources on the client that these users are actual profile bound to the resource isolate) in which one or more respective resource policies for the requested resource are installed, and wherein the consume request specifies a measurable, consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates (abs.; col.3, lines 17-63; wherein the ACL enforcer is enforcing one or more policies for the requested resources by the code installed by users profile bound to the resources of the client side); and Wherein the threshold rate is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the one of the plurality of resource consuming entities (col. 3, lines 35-63; col. 4, lines 27-34; col. 5, lines 11-40; wherein the consumption rate limit is enforced on the client side for all the resources that exists on the client which services multi-user profile needs); wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the requested resource with the

plurality of resource consuming entities that are bound to the one of the plurality of resource domains (col. 1, lines 40-60; col. 3, lines 17-63;col. 4, lines 27-34; col. 5, lines 11-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri and Dan because Dan teaching of consumption limit policy associated with the resource and resource requests would improve system performance and efficiency in resource usage based on set policy to protect the system from greedy resource consumers and bottlenecks.

As per claim 2, Suri teaches a first isolate resolves a trigger that determines if the threshold rate would be exceeded and delays servicing of the request, wherein the first isolate is an isolate that monitors and control resource requests for the resource separate from the implementation of the resource (page 8, lines 6-11).

As per claim 4, Suri teaches that the trigger is specified by a second isolate (pg. 9, lines 9-14).

As per claim 5, Suri teaches that the second isolate installs the trigger in one of the plurality of the resource domains and the first isolate determines the trigger from the one of the plurality of resource domains (pg. 7, lines 23-26; pg. 8, lines 6-11; pg. 9, lines 9-14).

As per claim 6, Suri does not explicitly teach the threshold rate indicates a

maximum allowable resource usage by a particular resource consumer within a given interval. However, Dan teaches the threshold rate indicates a maximum allowable resource usage by a particular resource consumer within a given interval (col. 3, lines 55-63; col. 4, lines 27-34; col. 5, lines 12-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching regulating the consumption rate which is the amount of resource within a given period of time would allow better management of system resource and avoiding resource bottleneck.

As per claim 7, Dan teaches that resource consumer comprises a client, an isolate, process, or an application (col. 3, lines 29-63; col. 5, lines 40-60).

As per claim 9, Suri does not explicitly teach recording previously consumed amounts of the resource. However, Dan teaches recording previously consumed amounts of the resource (col. 3, lines 54-63; col. 4, lines 27-36; col. 5, lines 12-40; wherein calculating whether a maximum quantity has been exceeded, the system records previous consumed amounts and wherein consumed amount= CONSAMT).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan because Dan teaching of recording previous consume request of the resource would improve system the system monitoring, regulating and control resource consumption.

As per claim 11, Suri does not explicitly teach determining comprises: determining a current usage of the requested resource; determining a potential usage of the resource based at least in part on the consume request; determining previously consumed amounts of the resource within a given interval from the recorded previous consumed amounts; and determining if the threshold rate will be exceeded based at least in part on the current usage, the potential usage, and the previously consumed amounts of the resource.

However, Dan teaches wherein determining comprises: determining a current usage of the requested resource ; determining a potential usage of the resource based at least in part on the consume request ; determining previously consumed amounts of the resource from the recorded previous consumed amounts ; and determining if the threshold rate will be exceeded based at least in part on the current usage, the potential usage, and the previously consumed amounts of the resource (Fig. 4; col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval . Furthermore, the whole time of monitoring the resource consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

As per claim 12, Suri doesn't explicitly teach that determining if the threshold rate will be exceeded is in accordance with the following, wherein previouslyconsumedamount indicates the amount of resource previously consumed within the given interval: amount overthreshold=potentialusage-currentusage+previouslyconsumedamount-threshold.

However Dan teaches determining if the threshold rate will be exceeded is in accordance with the following, wherein previouslyconsumedamount indicates the amount of resource previously consumed: amount overthreshold=potentialusage-currentusage+previouslyconsumedamount-threshold (col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval . Furthermore, the whole time of monitoring the resource consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

As per claim 14, Suri teaches that said delaying servicing of the request comprises sleeping for the period of time resource (page 8, lines 10-11).

As per claim 15, Suri teaches that determining if the threshold rate is exceeded comprises: determining a rate of requests from a particular resource consumer (pg. 7, lines 25-31); and comparing the rate of requests against the threshold rate (pg. 7, lines 28-31). Suri doesn't teach explicitly that the threshold rate indicates a maximum number of allowable requests for a resource within a given interval. However, Dan teaches that the threshold rate indicates a maximum number of allowable requests for a resource within a given interval (Fig. 4; col. 4, lines 27- col. 5, lines 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, and Dan because Dan teaching of the threshold rate indicated a maximum number of allowable requests for a resource within a given interval would improve system performance by adding the factor of the time interval into account, the system will not be overused by any resource request and it would be easy to identify whether the resource consumer is a potential attacker requests by measuring its consumption over a period of time.

As per claim 17, Dan teaches a computer program product encoded in one or more machine-readable storage media (col. 3, lines 1-15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of having storage to store code is well known in the art to have some sort of storage device in the system in order to execute system.

As per claim 18, Suri teach a method comprising:

throttling the consume requests to conform to a threshold (pg. 7, lines 26-31; pg. 8, lines 6-11).

Suri doesn't explicitly teach managing consume requests for a resource that are received from a plurality of computations that consume the resource and that are bound to one of a plurality of resource domains in which one or more respective resource policies for the resource are installed; wherein each of the consume requests specifies a measurable, consumable resource to be consumed during execution of one of the plurality of computations; and wherein the threshold is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains that are bound to the plurality of computations, wherein the one of the plurality of resource domains associates the one of the one or more respective resource policies for the resource with the plurality of computations bound to the one of the plurality of resource domains.

However, Dan teaches managing consume requests for a resource that are received from a plurality of computations that consume the resource and that are bound to one of a plurality of resource domains in which one or more respective resource policies for the resource are installed; wherein each of the consume requests specifies a measurable, consumable resource to be consumed during execution of one of the plurality of computations; and wherein the threshold is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains bound to the plurality of computations (wherein the consumption rate limit is enforced on the client side for all the resources that exists on the client which services multi-user profile needs), wherein the one of the plurality of resource domains associates the one of

the one or more respective resource policies for the resource with the plurality of computations bound to the one of the plurality of resource domains (abs.; col. 1, lines 40-60; col.3, lines 17-63; col. 4, lines 27-34; col. 5, lines 11-40; wherein the ACL enforcer is enforcing one or more policies for the requested resources by the code installed by users profile bound to the resources of the client side)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri and Dan because Dan teaching managing consume requests for a resource from a plurality of computations that consume the resource would improve system performance and efficiency in resource usage based on set policy to protect the system from greedy resource consumers and bottlenecks.

As per claim 19, Suri teaches that said throttling the consume requests comprises delaying those consume requests that would cause the threshold to be exceeded (pg. 8, lines 6- 11).

As per claim 20, Suri teaches that delaying comprises sleeping for a period of time (pg. 8, lines 6-11).

As per claim 21, Dan teaches determining a current usage, a potential usage, and a previously consumed resource amount (Fig. 4; col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval .

Furthermore, the whole time of monitoring the resource consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

As per claim 23, Suri teaches that threshold includes threshold comprises a threshold for a consumed resource amount, a threshold for a consume request rate, a threshold for resource consumption rate, or threshold number of resource consume requests (pg. 7, lines 26-31; Pg. 7, lines 32-35).

As per claim 24, Suri teaches that said managing consume request comprises a dispenser isolate managing resource requests, wherein isolates comprises a set of one or more encapsulated computations having a state that is independent of a state of other computations(page 8, lines 6- 11).

As per claim 25, Suri teaches said throttling comprises the dispenser isolate resolving a trigger (pg. 7, lines 23-26; pg. 8, lines 6-11).

As per claim 26, Suri teaches that the trigger is specified by a second isolate (pg. 9, lines 9-14).

As per claim 27, Suri teaches that said throttling further comprises the second isolate installing the trigger in the resource domain (pg. 7, lines 23-26; pg. 8, lines 6-11; pg. 9, lines 9- 14).

As per claim 28, Dan teaches the method embodied as a computer program product encoded in one or more machine readable storage medium (col. 3, lines 10-15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of having storage to store code is well known in the art to have some sort of storage device in the system in order to execute system.

As per claim 29, Suri teach a rate controller that delays resource consumes requests from one of the plurality of resource consuming isolate that will cause a threshold to be exceeded and wherein an isolate is a set of one or more computations that that do not share computational state with other computations (page 7, lines 30-31; page 10, lines 10-11; Fig. 1; wherein each agent is an isolate that is a set of one or more computations of transactions that does not share computational state with other agents).

Suri teaching doesn't explicitly teach computer program product encoded in one or more machine-readable storage media, a posting facility code that posts consume requests for resources; a plurality of resource domains that each associate one or more respective resource policies for a requested resource with a plurality of resource consuming isolates that are bound to the resource domain; wherein consume requests for

the requested resource are received from one of the plurality of resource consuming isolates that are bound to one of the plurality of resource domains; and wherein each of the consume requests specifies a measurable, consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates; and wherein the threshold is specified in the one or more respective resource policy installed in the one of the plurality of resource domain that are bound to the one of the plurality of resource consuming isolates.

However, Dan teaches computer program product encoded in one or more machine-readable storage media, a posting facility code that posts consume requests for resources; a plurality of resource domains that each associate one or more respective resource policies for a requested resource with a plurality of resource consuming isolates that are bound to the resource domain; wherein consume requests for the requested resource are received from one of the plurality of resource consuming isolates that are bound to one of the plurality of resource domains; and wherein each of the consume requests specifies a measurable, consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates (wherein multi-user profiles are bound to the client side using access control, it is implicit in Dan teaching that user is actually a user profile that is bound to the resources in the client side. For example Ramamurthy et al. (Us 7,080,077), cited in previous office action, teaching that users bound to resources on the client that these users are actual profile bound to the resource isolate); and wherein the threshold is specified in the one or more respective resource policy installed in the one of the plurality of resource domain that are bound to the one of the plurality of resource consuming isolates(abs.; col. 1, lines

40-60; col.3, lines 10-63; col. 4, lines 27-34; col. 5, lines 11-40; wherein the ACL enforcer is enforcing one or more policies for the requested resources by the code installed by users profile bound to the resources of the client side)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri and Dan because Dan teaching of consumption limit policy associated with the resource and resource requests would improve system performance and efficiency in resource usage based on set policy to protect the system from greedy resource consumers and bottlenecks. It is well known in the art to have some sort of storage device in the system in order to execute system.

The combined teaching of Suri and Dan doesn't explicitly teach a posting facility code that posts consume requests for resources.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to conclude from Suri's teaching of program console that interacts with the consumer within the execution system that this console is a posting facility that posts consume requests for resource which would improve system communication with the consumer by providing a front end interaction(API) that allow the consumer to interact with the execution system where servicing resource requests decision takes place.

As per claim 30, Suri teaches that the program instructions executable to implement the posting facility are dependent at least in part on a dispenser class, wherein the dispenser class defines an intermediary set of one or more computations that monitor and control resource requests (pg. 8, lines 24-29; Fig. 1).

As per claim 31, Suri teaches that the program instructions executable to implement the rate control code are independent at least in part on a trigger class, wherein the trigger class defines one or more computations that query existence of at least one condition based at least in part on usage of a given resource (pg. 7, lines 23-31; pg. 8, lines 6-11; pg. 9, lines 9-14).

As per claim 32, Suri teaches that threshold includes threshold consumed resource amount, threshold for resource consumption rate, threshold for a number of resource consume requests or threshold for consume request rate (pg. 7, lines 26-31; Pg. 7, lines 32-35).

As per claim 33, Suri teaches the rate control code invokes a sleep computation to delay resource consume requests (page 8, lines 6-11).

As per claim 34, Suri does not explicitly teach to implement the rate control is further executable to implement determining one or more of: a current resource usage, a potential resource usage, and a previously consumed resource amount within an interval.

However, Dan teaches that the rate control code that further determines a current resource usage, a potential resource usage, and a previously consumed resource amount (col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval . Furthermore, the whole time of monitoring the resource

consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

As per claim 36, Suri teaches a first sequence of instructions determining if servicing a consume request from one of the plurality of resource consuming isolates will cause a threshold to be exceeded (pg. 8, lines 9-10); and a second sequence of instructions determining a period of time to delay the request to avoid exceeding the threshold (pg. 8, lines 9-11) ; wherein an isolate is a set of one or more computations that do not share computational state with other computations(page 7, lines 30-31; page 10, lines 10-11; Fig. 1; wherein each agent is an isolate that is a set of one or more computations of transactions that does not share computational state with other agents).

Suri doesn't explicitly teach a computer program product encoded on one or more machine-readable storage medium storing program instructions executable to implement a plurality of resource domains each associating one or more respective a resource policies for a requested resource with a plurality of resource consuming isolates that are bound to one of the resource domains; wherein the consume request specifies a measurable consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates; wherein the threshold is specified in one of the one or more respective resource policies for the

requested resource installed in one of the plurality of the resource domains.

However, Dan teaches a computer program product encoded on one or more machine-readable storage medium storing program instructions executable to implement a plurality of resource domains each associating one or more respective a resource policies for a requested resource with a plurality of resource consuming isolates that are bound to one of the resource domains; wherein the consume request specifies a measurable consumable resource to be consumed during execution of one or more computations of the one of the plurality of resource consuming isolates (wherein multi-user profiles are bound to the client side using access control, it is implicit in Dan teaching that user is actually a user profile that is bound to the resources in the client side. For example Ramamurthy et al. (Us 7,080,077), cited in previous office action, teaching that users bound to resources on the client that these users are actual profile bound to the resource isolate); wherein the threshold is specified in one of the one or more respective resource policies for the requested resource installed in one of the plurality of the resource domains (abs.; col. 1, lines 40-60; col.3, lines 17-63; col. 4, lines 27-34; col. 5, lines 11-40; wherein the ACL enforcer is enforcing one or more policies for the requested resources by the code installed by users profile bound to the resources of the client side)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri and Dan because Dan teaching of consumption limit policy associated with the resource and resource requests would improve system performance and efficiency in resource usage based on set policy to protect the system from greedy resource consumers and bottlenecks.

As per claim 37, Suri teaches that threshold comprises a threshold for a consumed

resource amount , a threshold for a resource consumption rate, a threshold for a number of resource consume requests or a threshold for a consume request rate (pg. 7, lines 26-31; Pg. 7, lines 32- 35).

As per claim 38, Suri doesn't explicitly teach the period of time to delay the request is based at least in part on a currently used amount of the resource, a potentially used amount of the resource based on the resource request, a previously consumed amount of the resource, a time interval, and the threshold, wherein the previously consumed amount of the resource indicate the amount of previously consumed resource within the interval.

However, Dan teaches the period of time to delay the request is based at least in part on a currently used amount of the resource, a potentially used amount of the resource based on the resource request, a previously consumed amount of the resource, and the threshold, wherein the previously consumed amount of the resource indicate the amount of previously consumed resource within the interval (col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval . Furthermore, the whole time of monitoring the resource consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to

fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

As per claim 40, Suri teaches that delaying the request comprises sleeping (pg. 8, lines 10-11).

As per claim 41, Suri teaches an apparatus comprising:

system memory (page 5, lines 38-39); and

means for throttling resource requests to comply with a threshold, which corresponds to a resource (page 8, lines 6-11).

wherein an isolate is a set of one or more computations that do not share computational state with other computations (page 7, lines 30-31; page 10, lines 10-11; Fig. 1; wherein each agent is an isolate that is a set of one or more computations of transactions that does not share computational state with other agents).

Suri doesn't explicitly teach that requests for a resource are received from a plurality of resource consuming isolates that are bound to one of a plurality of a resource domains in which one or more respective resource policies for the resource are installed to comply with a threshold; wherein each of the requests specifies a measurable, consumable resource to be consumed during execution of one or more computations of one of the plurality of resource consuming isolates; wherein the threshold is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains bound to the plurality of resource consuming isolates, wherein the one

or more respective resource domains associates the one of the one or more respective resource policies for the resource with the plurality of resource consuming isolates bound to the one of the plurality of resource domains.

However, Dan teaches requests for a resource are received from a plurality of resource consuming isolates that are bound to one of a plurality of a resource domains in which one or more respective resource policies for the resource are installed to comply with a threshold; wherein each of the requests specifies a measurable, consumable resource to be consumed during execution of one or more computations of one of the plurality of resource consuming isolates(wherein multi-user profiles are bound to the client side using access control, it is implicit in Dan teaching that user is actually a user profile that is bound to the resources in the client side. For example Ramamurthy et al. (Us 7,080,077), cited in previous office action, teaching that users bound to resources on the client that these users are actual profile bound to the resource isolate); wherein the threshold is specified in one of the one or more respective resource policies installed in the one of the plurality of resource domains bound to the plurality of resource consuming isolates, wherein the one or more respective resource domains associates the one of the one or more respective resource policies for the resource with the plurality of resource consuming isolates bound to the one of the plurality of resource domains (abs.; col. 1, lines 40-60; col.3, lines 17-63; col. 4, lines 27-34; col. 5, lines 11-40; wherein the ACL enforcer is enforcing one or more policies for the requested resources by the code installed by users profile bound to the resources of the client side)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri and Dan because Dan teaching of consumption limit

policy associated with the resource and resource requests would improve system performance and efficiency in resource usage based on set policy to protect the system from greedy resource consumers and bottlenecks.

As per claim 42, Suri teaches that threshold comprises a threshold for a consumed resource amount , a threshold for a resource consumption rate, a threshold for a number of resource consume requests or a threshold for a consume request rate (pg. 7, lines 26-31; Pg. 7, lines 32- 35).

As per claim 43, Suri teaches means for determining if the threshold will be exceeded (page 8, lines 6-11).

Claims 3 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suri et al. ("Strong mobility and fine-grained resource control in NOMADS", ACM, 2000, pages 1-12), in view of Dan et al. (US 5,825,877), as applied to claims 1 and 41 above and further in view of Courtrai et al ("Resource management for parallel adaptive components", IEEE, 2003, pages 1-7).

As per claim 3, the combined teaching of Suri, Bose and Ramamurthy does not explicitly teach that the first isolate monitors and controls resource requests based at least in part on a set of common attributes used to characterize the resource, wherein the set of attributes comprises one or more attributes indicating whether the resource is one or more of disposable, revocable, reservable, and bounded.

However, Courtrai, teaches that the first isolate monitors and controls resource requests based at least in part on a set of common attributes characterizing the resource (pg. 5, left col., lines 19-23; pg. 5,right col., lines 28-33; pg. 6, left col., lines 1-8; Fig. 3).

The combined teaching of Suri, Dan and Courtrai doesn't explicitly teach that he set of attributes include disposable, revocable, reservable, and bounded. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to be motivated to use the combine teaching of Suri and Courtrai to include the well known attributes of disposable, revocable, reservable, and bounded because this is can apply to a broad range of attribute types that cover the well known range of types to facilitate the selection and monitoring of resources request.

As per claim 44, the combined teaching of Suri and Dan doesn't teach that the resource is characterized by a set of attributes that are common across different resources.

However, Courtrai teaches that the resource is characterized by a set of attributes that are common across different resources (pg. 5, left col., lines 19-23; pg. 5,right col., lines 28-33; pg. 6, left col., lines 1-8; Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Courtrai teaching because Courtrai teaching of characterizing resources with a set of attributes that are common across a wide rage or resource would improve the system performance since controlling and searching for the resource will be much quicker and more efficient.

As per claim 45, the combined teaching of Suri and Dan don't teach that the set of

attributes comprises one or more attributed indicating whether the resource is one or more of disposable, revocable, reservable, and bounded.

However, It would have been obvious to one of ordinary skill in the art at the time the invention was made would be motivated to include the well known attributes of disposable, revocable, reservable, and bounded because this is can apply to a broad range of attribute types that cover the well known range of types to facilitate the selection and monitoring of resources request.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suri et al. ("Strong mobility and fine-grained resource control in NOMADS", ACM, 2000, pages 1-12), in view of Dan et al. (US 5,825,877), as applied to claim 6 above, and further in view of Chambliss et al. (US 7,228,354 B2).

As per claim 8, Dan teaches recording previous consume requests for the resource (col. 5, lines 40-45) but the combined teaching of Suri, Dan doesn't explicitly teach recording previous consume requests from the consumer. However, Chambliss teaches recording previous consume requests from the resource consumer (col. 12, lines 5-23; Fig. 8, element 806).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Chambliss because Chambliss teaching of recording previous consume request from the consumer would improve system monitoring and resource regulating and control by identifying consumer with high number of requests that exceed the threshold and be able to regulate resource

consumption.

Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suri et al. ("Strong mobility and fine-grained resource control in NOMADS", ACM, 2000, pages 1-12), in view of Dan et al. (US 5,825,877), as applied to claim 9 above, and further in view of Lin et al. (US 6122663).

As per claim 10, the combined teaching of Suri and Dan doesn't teach purging those recorded previously consumed amounts of the resource that fall beyond the given interval.

However, Lin teaches purging those recorded previously consumed amounts of the resource that fall beyond the given interval (col. 6, lines 45-67; wherein old purged records are records beyond a given time).

it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri, Dan and Lin because Lin teaching of purging old records which would improve system performance by deleting unnecessary old information and freeing up the space for more important operations of the system.

Claims 13, 16, 22, 35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suri et al. ("Strong mobility and fine-grained resource control in NOMADS", ACM, 2000, pages 1-12), in view of Dan et al. (US 5,825,877) as applied to claim 1 above, and further in view of Belissent (WO 02/01834 12).

As per claim 13, the combined teaching of Suri, Bose, Ramamurthy, Czajkowski and Chambliss doesn't explicitly teach that the period of time is determined with the following: period of time = (amount overthreshold/threshold)*interval.

However, Belissent teaches that a period of time that the sleep computation is invoked is determined in accordance with the following: period of time= (amount overthreshold/threshold)*interval (page 9, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Belissent because Belissent teaching of calculating period of time that the sleep computation is invoked would improve system performance since calculating the waiting time function, would give the system a better accurate measurement as for how long the request has to be delayed to conform with the threshold by taking into consideration the amount of request that is over the threshold.

As per claim 16, Belissent teach determining the rate of requests comprises: determining a number of requests received from the particular resource consumer over the given interval (pg. 9, lines 1-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Belissent because Belissent teaching of recording consume request from the consumer would improve system monitoring and resource regulating and control by identifying consumer with high number of requests that exceed the threshold and be able to regulate resource consumption.

As per claim 22, Suri doesn't explicitly teach that the period of time is determined in accordance with the following: amount overthreshold= potentialusage- currentusage + previouslyconsumedamount-threshold; and period of time=(amount over threshold/threshold)*interval.

However, Dan teaches a period of time that the period of time is determined in accordance with the following: period of time= (amount overthreshold/threshold)*interval (col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

The combined teaching of Suri and Dan does not explicitly teach period of time= (amount overthreshold/threshold)*interval.

However, Belissent teaches the period of time is determined in accordance with the following: period of time= (amount overthreshold/threshold)*interval (page 9, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Belissent because Belissent teaching of calculating period of time that the sleep computation is invoked would improve system performance and throughput by regulating the time to delay request, request can be proceeded without denial of service in a later time.

As per claim 35, Suri doesn't explicitly teach that a period of time that the sleep computation is invoked is determined in accordance with the following: amount_overthreshold = potentialusage - currentusage + previouslyconsumedamount - threshold; and period of time= (amount_overthreshold/threshold) * interval.

However, Dan teaches amount_overthreshold = potentialusage - currentusage + previouslyconsumedamount -threshold (col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval . Furthermore, the whole time of monitoring the resource consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

The combined teaching of Suri and Dan does not explicitly teach period of time= (amount overthreshold/threshold)*interval.

However, Belissent teaches the period of time is determined in accordance with the following: period of time= (amount overthreshold/threshold)*interval (page 9, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Belissent because Belissent teaching of

calculating period of time that the sleep computation is invoked would improve system performance and throughput by regulating the time to delay request, request can be proceeded without denial of service in a later time.

As per claim 39, Suri doesn't explicitly teach that a period of time that the sleep computation is invoked is determined in accordance with the following: amount overthreshold=potentialusage- currentusage + previouslyconsumedamount – threshold

However, Dan teaches a period of time that the sleep computation is invoked is determined in accordance with the following: amount overthreshold=potentialusage- currentusage + previouslyconsumedamount – threshold (col.3, lines 23-63; col. 4, lines 27-35; col. 5, lines 12-45; wherein current usage = actual use, potential use= REQAMT, consumed amount= CONSAMT and wherein it is implicit that calculating consumption rate and how long the request will be delayed which depend on the time period/ interval . Furthermore, the whole time of monitoring the resource consumption is considered a time interval).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Suri and Dan because Dan teaching of calculating delay time based on the present and history of execution would allow one to fine tune the system to better control and manage resource consumption and prevent bottleneck in the system

The combined teaching of Suri and Dan does not explicitly teach period of time= (amount overthreshold/threshold)*interval.

However, Belissent teaches that a period of time that the sleep computation is

invoked is determined in accordance with the following: period of time = (amount_overthreshold / threshold) * interval ((page 9, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Suri, Dan and Belissent because Belissent teaching of calculating period of time that the sleep computation is invoked would improve system performance and throughput by regulating the time to delay request, request can be proceeded without denial of service in a later time.

Response to Arguments

12. Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

czajkowski et al. ("resource management interface for Java platform", May 2003, SUN microsystems. Pages 1-17) teaches the concepts of resource consuming isolates bound to one or more resource domains isolates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAROLINE ARCOS whose telephone number is

(571)270-3151. The examiner can normally be reached on Monday-Thursday 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Caroline Arcos/

Examiner, Art Unit 2195

/Chat C. Do/
Primary Examiner, Art Unit 2193